Zhihao Yang

List of Publications by Year
in descending order

118 papers	2,380 citations	236925 25 h-index	243625 44 g-index
121 all docs	121 docs citations	121 times ranked	1823 citing authors

#	Article	IF	Citations
1	A Semantic Network Encoder for Associated Fact Prediction. IEEE Transactions on Knowledge and Data Engineering, 2022, 34, 5114-5125.	5.7	1
2	A network representation approach for COVID-19 drug recommendation. Methods, 2022, 198, 3-10.	3.8	7
3	MRC4BioER: Joint extraction of biomedical entities and relations in the machine reading comprehension framework. Journal of Biomedical Informatics, 2022, 125, 103956.	4.3	10
4	Multimodal reasoning based on knowledge graph embedding for specific diseases. Bioinformatics, 2022, 38, 2235-2245.	4.1	15
5	Refining electronic medical records representation in manifold subspace. BMC Bioinformatics, 2022, 23, 115.	2.6	3
6	Manifold biomedical text sentence embedding. Neurocomputing, 2022, 492, 117-125.	5.9	1
7	Lexicon Knowledge Boosted Interaction Graph Network for Adverse Drug Reaction Recognition From Social Media. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 2777-2786.	6.3	7
8	Sentence representation with manifold learning for biomedical texts. Knowledge-Based Systems, 2021, 218, 106869.	7.1	18
9	Biomedical named entity recognition using BERT in the machine reading comprehension framework. Journal of Biomedical Informatics, 2021, 118, 103799.	4.3	55
10	Document Retrieval for Precision Medicine Using a Deep Learning Ensemble Method. JMIR Medical Informatics, 2021, 9, e28272.	2.6	4
11	Adversarial transfer network with bilinear attention for the detection of adverse drug reactions from social media. Applied Soft Computing Journal, 2021, 106, 107358.	7.2	4
12	SGAT: a Self-supervised Graph Attention Network for Biomedical Relation Extraction. , 2021, , .		1
13	Deep learning with language models improves named entity recognition for PharmaCoNER. BMC Bioinformatics, 2021, 22, 602.	2.6	4
14	Co-Attentive Span Network with Multi-task learning for Biomedical Named Entity Recognition. , 2021, , .		3
15	Biomedical document triage using a hierarchical attention-based capsule network. BMC Bioinformatics, 2020, 21, 380.	2.6	6
16	Incorporating representation learning and multihead attention to improve biomedical cross-sentence n-ary relation extraction. BMC Bioinformatics, 2020, 21, 312.	2.6	3
17	KGHC: a knowledge graph for hepatocellular carcinoma. BMC Medical Informatics and Decision Making, 2020, 20, 135.	3.0	21
18	Chemicalâ€“protein interaction extraction via Gaussian probability distribution and external biomedical knowledge. Bioinformatics, 2020, 36, 4323-4330.	4.1	28

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19	Attention guided capsule networks for chemical-protein interaction extraction. Journal of Biomedical Informatics, 2020, 103, 103392.	4.3	16
20	A neural network-based joint learning approach for biomedical entity and relation extraction from biomedical literature. Journal of Biomedical Informatics, 2020, 103, 103384.	4.3	56
21	Interactive Self-Attentive Siamese Network for Biomedical Sentence Similarity. IEEE Access, 2020, 8, 84093-84104.	4.2	14
22	Exploiting sequence labeling framework to extract document-level relations from biomedical texts. BMC Bioinformatics, 2020, 21, 125.	2.6	10
23	Document-Level Biomedical Relation Extraction Using Graph Convolutional Network and Multihead Attention: Algorithm Development and Validation. JMIR Medical Informatics, 2020, 8, e17638.	2.6	15
24	A Graph Convolutional Networkâ€“Based Method for Chemical-Protein Interaction Extraction: Algorithm Development. JMIR Medical Informatics, 2020, 8, e17643.	2.6	11
25	Cross2Self-attentive Bidirectional Recurrent Neural Network with BERT for Biomedical Semantic Text Similarity. , 2020, , .		6
26	A Graph-boosted Framework for Adverse Drug Event Detection on Twitter. , 2020, , .		1
27	Extracting biomedical relations via a multi-head attention based graph convolutional network. , 2020, , .		4
28	Star-BiLSTM-LAN for Document-level Mutation-Disease Relation Extraction from Biomedical Literature. , 2020, , .		3
29	Gated iterative capsule network for adverse drug reaction detection from social media. , 2020, , .		4
30	Incorporating User Generated Content for Drug Drug Interaction Extraction Based on Full Attention Mechanism. IEEE Transactions on Nanobioscience, 2019, 18, 360-367.	3.3	6
31	BioWordVec,Âimproving biomedical word embeddings with subword information and MeSH. Scientific Data, 2019, 6, 52.	5.3	268
32	Neural network-based approaches for biomedical relation classification: A review. Journal of Biomedical Informatics, 2019, 99, 103294.	4.3	71
33	HMNPPIDâ€”human malignant neoplasm proteinâ€“protein interaction database. Human Genomics, 2019, 13, 44.	2.9	2
34	A Deep Learning Approach With Deep Contextualized Word Representations for Chemicalâ€“Protein Interaction Extraction From Biomedical Literature. IEEE Access, 2019, 7, 151034-151046.	4.2	24
35	Extracting drugâ€“drug interactions with hybrid bidirectional gated recurrent unit and graph convolutional network. Journal of Biomedical Informatics, 2019, 99, 103295.	4.3	20
36	Adverse drug reaction detection via a multihop self-attention mechanism. BMC Bioinformatics, 2019, 20, 479.	2.6	18

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37	Chemicalâ€“protein interaction extraction via contextualized word representations and multihead attention. Database: the Journal of Biological Databases and Curation, 2019, 2019, .	3.0	14
38	Integrating shortest dependency path and sentence sequence into a deep learning framework for relation extraction in clinical text. BMC Medical Informatics and Decision Making, 2019, 19, 22.	3.0	38
39	Detection of protein complexes from multiple protein interaction networks using graph embedding. Artificial Intelligence in Medicine, 2019, 96, 107-115.	6.5	14
40	GrEDeL: A Knowledge Graph Embedding Based Method for Drug Discovery From Biomedical Literatures. IEEE Access, 2019, 7, 8404-8415.	4.2	46
41	Chemical-protein interaction extraction from biomedical literature: a hierarchical recurrent convolutional neural network method. International Journal of Data Mining and Bioinformatics, 2019, 22, 113.	0.1	3
42	Residual Connected Enhanced Sequential Inference Model for Natural Language Inference. , 2019, , .		0
43	Disease Gene Prediction Based on Heterogeneous Probabilistic Hypergraph Ranking. , 2019, , .		0
44	A network embedding model for pathogenic genes prediction by multi-path random walking on heterogeneous network. BMC Medical Genomics, 2019, 12, 188.	1.5	11
45	Detecting adverse drug reactions from social media based on multi-channel convolutional neural networks. Neural Computing and Applications, 2019, 31, 4799-4808.	5.6	9
46	An attention-based BiLSTM-CRF approach to document-level chemical named entity recognition. Bioinformatics, 2018, 34, 1381-1388.	4.1	277
47	A hybrid model based on neural networks for biomedical relation extraction. Journal of Biomedical Informatics, 2018, 81, 83-92.	4.3	97
48	Drugâ€“drug interaction extraction via hierarchical RNNs on sequence and shortest dependency paths. Bioinformatics, 2018, 34, 828-835.	4.1	120
49	The impact of protein interaction networksâ€™ characteristics on computational complex detection methods. Journal of Theoretical Biology, 2018, 439, 141-151.	1.7	14
50	Hierarchical Recurrent Convolutional Neural Network for Chemical-protein Relation Extraction from Biomedical Literature. , 2018, , .		4
51	Multipath2vec: Predicting Pathogenic Genes via Heterogeneous Network Embedding. , 2018, , .		1
52	A Knowledge Graph based Bidirectional Recurrent Neural Network Method for Literature-based Discovery. , 2018, , .		5
53	Protein Complexes Detection Based on Global Network Representation Learning. , 2018, , .		1
54	PC-SENE: A node embedding based method for protein complex detection. , 2018, , .		0

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55	Full-attention Based Drug Drug Interaction Extraction Exploiting User-generated Content. , 2018, , .		8
56	A multi-task learning based approach to biomedical entity relation extraction. , 2018, , .		8
57	Protein-Protein Interaction Article Classification: A Knowledge-enriched Self-Attention Convolutional Neural Network Approach. , 2018, , .		2
58	HMNPPID: A Database of Protein-protein Interactions Associated with Human Malignant Neoplasms. , 2018, , .		0
59	A neural network approach to chemical and gene/protein entity recognition in patents. Journal of Cheminformatics, 2018, 10, 65.	6.1	9
60	Identifying protein complexes based on node embeddings obtained from protein-protein interaction networks. BMC Bioinformatics, 2018, 19, 332.	2.6	6
61	Document triage for identifying proteinâ€“protein interactions affected by mutations: a neural network ensemble approach. Database: the Journal of Biological Databases and Curation, 2018, 2018, .	3.0	4
62	SemaTyP: a knowledge graph based literature mining method for drug discovery. BMC Bioinformatics, 2018, 19, 193.	2.6	60
63	An effective neural model extracting document level chemical-induced disease relations from biomedical literature. Journal of Biomedical Informatics, 2018, 83, 1-9.	4.3	30
64	DIGNiFI: Discovering causative genes for orphan diseases using protein-protein interaction networks. BMC Systems Biology, 2017, 11, 23.	3.0	12
65	An uncertain model-based approach for identifying dynamic protein complexes in uncertain protein-protein interaction networks. BMC Genomics, 2017, 18, 743.	2.8	8
66	A hybrid protein-protein interaction triple extraction method for biomedical literature. , 2017, , .		4
67	A multiple distributed representation method based on neural network for biomedical event extraction. BMC Medical Informatics and Decision Making, 2017, 17, 171.	3.0	24
68	Disease named entity recognition from biomedical literature using a novel convolutional neural network. BMC Medical Genomics, 2017, 10, 73.	1.5	36
69	An attention-based effective neural model for drug-drug interactions extraction. BMC Bioinformatics, 2017, 18, 445.	2.6	69
70	Semisupervised Learning Based Disease-Symptom and Symptom-Therapeutic Substance Relation Extraction from Biomedical Literature. BioMed Research International, 2016, 2016, 1-13.	1.9	5
71	DIGNiFI. , 2016, , .		0
72	ML-CNN: A novel deep learning based disease named entity recognition architecture. , 2016, , .		6

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73	CIDExtractor: A chemical-induced disease relation extraction system for biomedical literature. , 2016, , .		9
74	Disease-specific protein complex detection in the human protein interaction network with a supervised learning method. , 2016, , .		1
75	Drug drug interaction extraction from biomedical literature using syntax convolutional neural network. Bioinformatics, 2016, 32, 3444-3453.	4.1	175
76	A method for predicting protein complex in dynamic PPI networks. BMC Bioinformatics, 2016, 17, 229.	2.6	29
77	Biomedical event trigger detection by dependency-based word embedding. BMC Medical Genomics, 2016, 9, 45.	1.5	18
78	Construction of dynamic probabilistic protein interaction networks for protein complex identification. BMC Bioinformatics, 2016, 17, 186.	2.6	26
79	A graph kernel based on context vectors for extracting drugâ€“drug interactions. Journal of Biomedical Informatics, 2016, 61, 34-43.	4.3	38
80	Biomedical event extraction based on distributed representation and deep learning. , 2016, , .		3
81	Disease Related Knowledge Summarization Based on Deep Graph Search. BioMed Research International, 2015, 2015, 1-11.	1.9	0
82	Supervised Learning Based Hypothesis Generation from Biomedical Literature. BioMed Research International, 2015, 2015, 1-12.	1.9	9
83	Biomedical event trigger detection by dependency-based word embedding. , 2015, , .		6
84	Discover potential adverse drug reactions using the skip-gram model. , 2015, , .		1
85	Learning to rank for biomedical information retrieval. , 2015, , .		1
86	Deep neural network based protein-protein interaction extraction from biomedical literature. , 2015, , .		1
87	Gene Function Prediction Based on the Gene Ontology Hierarchical Structure. PLoS ONE, 2014, 9, e107187.	2.5	27
88	Data integration and supervised learning based protein complex detection method. , 2014, , .		0
89	Deep graph search based disease related knowledge summarization from biomedical literature. , 2014, , .		0
90	Drug name recognition in biomedical texts: a machine-learning-based method. Drug Discovery Today, 2014, 19, 610-617.	6.4	29

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91	Exploring the relation between the characteristics of protein interaction networks and the performances of computational complex detection methods. , 2014, , .		0
92	PPIExtractor: A Protein Interaction Extraction and Visualization System for Biomedical Literature. IEEE Transactions on Nanobioscience, 2013, 12, 173-181.	3.3	14
93	Integrating multiple biomedical resources for protein complex prediction. , 2013, , .		2
94	Semi-supervised method for biomedical event extraction. Proteome Science, 2013, 11, S17.	1.7	8
95	Protein Complex Identification by Integrating Protein-Protein Interaction Evidence from Multiple Sources. PLoS ONE, 2013, 8, e83841.	2.5	11
96	A syntactic rule-based method for automatic pathway information extraction from biomédical literature. , 2012, , .		1
97	Classifying protein complexes from candidate subgraphs using fuzzy machine learning model. , 2012, , .		1
98	Combining labeled and unlabeled data for biomédical event extraction. , 2012, , .		0
99	PPIExtractor: A protein-protein interaction Extractor for biomédical literature. , 2012, , .		1
100	A Single Kernel-Based Approach to Extract Drug-Drug Interactions from Biomedical Literature. PLoS ONE, 2012, 7, e48901.	2.5	22
101	Filtering Gene Ontology semantic similarity for identifying protein complexes in large protein interaction networks. Proteome Science, 2012, 10, S18.	1.7	13
102	Identifying Protein Complexes from PPI Networks Using GO Semantic Similarity. , 2011, , .		2
103	Neighborhood hash graph kernel for proteinâ€“protein interaction extraction. Journal of Biomedical Informatics, 2011, 44, 1086-1092.	4.3	26
104	Multiple kernel learning in proteinâ€“protein interaction extraction from biomedical literature. Artificial Intelligence in Medicine, 2011, 51, 163-173.	6.5	42
105	Ranking support vector machine for multiple kernels output combination in proteinâ€“protein interaction extraction from biomedical literature. Proteomics, 2011, 11, 3811-3817.	2.2	3
106	BioPPISVMExtractor: A proteinâ€“protein interaction extractor for biomedical literature using SVM and rich feature sets. Journal of Biomedical Informatics, 2010, 43, 88-96.	4.3	43
107	Ranking SVM for multiple kernels output combination in protein-protein interaction extraction from biomedical literature. , 2010, , .		0
108	Ontology integration to identify protein complex in protein interaction networks. , 2010, , .		4

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109	Incorporating rich background knowledge for gene named entity classification and recognition. BMC Bioinformatics, 2009, 10, 223.	2.6	40
110	Applying Feature Coupling Generalization for Protein-Protein Interaction Extraction. , 2009, , .		2
111	Exploiting the performance of dictionary-based bio-entity name recognition in biomedical literature. Computational Biology and Chemistry, 2008, 32, 287-291.	2.3	35
112	Exploiting the contextual cues for bio-entity name recognition in biomedical literature. Journal of Biomedical Informatics, 2008, 41, 580-587.	4.3	17
113	SVM-based Protein-Protein Interaction Extraction from Medline abstracts. , 2007, , .		4
114	Two Approaches for Biomedical Text Classification. , 2007, , .		2
115	Opinion Mining in e-Learning System. , 2007, , .		25
116	Question-answering system based on concepts and statistics. Frontiers of Electrical and Electronic Engineering in China: Selected Publications From Chinese Universities, 2007, 2, 23-28.	0.6	1
117	Opinion Mining in e-Learning System. , 2007, , .		3
118	Gene Name Automatic Recognition in Biomedical Literature. , 2006, , .		0